

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH ADMINISTRATION

BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY

PEORIA 5, ILLINOIS

April 19, 1949

Dr. Joshua Lederberg
Department of Genetics
The University of Wisconsin
Madison 6, Wisconsin

Dear Joshua:

In answer to your request of April 15, I am sending you two samples of calcium lactobionate for your interesting work on adaptation. One of the samples (NRRL 2378-7-A; 500 mg.) is the same as you received previously. It was purified by way of the basic calcium salt which should remove lactose. The other sample (NRRL 2512-42-A; 20 grams) contains 0.52 percent lactose and was found to be 93.7 percent pure based on galactose determination after hydrolysis. Based on calcium analysis, it was 96.7 percent pure. The loss on drying to constant weight at 100° is 10.0 percent.

If you can establish without question the results you describe, it would appear that you have made a valuable contribution to your field. Although I don't know too much about it, it would seem to me that the whole experiment hinges on whether or not you have lactose-free calcium lactobionate. If I am right, how do you go about proving that you have such a lactobionate? I certainly wouldn't want to be quoted as saying that any of the samples I sent you fulfill the requirements of your experiment as I view it. Let me hear from you on this point.

I know of only two good ways of replacing calcium by Na^+ or H^+ . The first is by removal of the calcium with amberlite IR-100 and the other is by the addition of slightly less than the calculated amount of sodium oxalate.

Let me hear from you soon, and keep up the good work.

Sincerely yours,



Frank H. Stodola, In Charge
Chemistry Section
Fermentation Division
Northern Regional Research Laboratory